

WHAT IS CLAIMED IS:

1. An input device for generating an input operation signal representing operations of a specific input device, comprising:

5 a tapping sound detector configured to detect a tapping sound made by a user to generate a tapping sound detection signal;

a converter configured to convert the tapping sound detection signal into an input operation signal simulating an operation of a specific input device; and

10 an operation signal output device configured to output the input operation signal.

2. An input device according to claim 1, wherein the specific input device is a mouse, and the operations represented by the input operation signal include on/off of a mouse button.

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3. An input device according to claim 1, wherein the operation signal output device includes a wireless transmitter.

4. An input device according to claim 2, wherein  
20 the input operation signal includes a plurality of signal patterns representing a plurality of operations of the mouse button, respectively, and the converter generates the input operation signal having one of the plurality of signal patterns according to at least one of a frequency and an interval of the tapping sounds.

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5. An input device according to claim 4, wherein  
the plurality of operations of the mouse button include a click, a double click, and dragging, and

30 the converter generates the input operation signal having one of the signal patterns representing the click, double click, and dragging in response to one, two and three tapping sounds, respectively.

6. An input device according to claim 5, wherein when receiving a new tapping sound detection signal after generation of the input operation signal representing the dragging, the converter converts the new tapping sound detection signal into another input operation signal representing end of the dragging.

7. An input device according to claim 1, wherein the converter executes:

10 turning ON the input operation signal when a first tapping sound is detected by the tapping sound detection device;

(a) when a second tapping sound is not detected within a first period of time after the detection of the first tapping sound, turning OFF the input operation signal;

15 (b) when the second tapping sound is detected within the first period of time, maintaining the input operation signal ON;

(b1) when a third tapping sound is not detected within a second period of time after the detection of the second tapping sound, turning OFF the input operation signal, and then turning ON the input operation signal for a predetermined period of time, and

(b2) when the third tapping sound is detected within the second period of time, maintaining the input operation signal ON, and then turning OFF the input operation signal when a fourth tapping sound is subsequently detected.

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8. An input device according to claim 1, wherein

the input operation signal includes a plurality of signal patterns representing a plurality of operations of the specific input device, respectively, and

30 the converter generates the input operation signal having one of the plurality of signal patterns in response to a number of tapping sounds

detected within a predetermined period of time after a first tapping sound is detected.

9. An input device according to claim 8, wherein

5       the specific input device is a mouse, and the plurality of signal patterns represent a plurality of operations of the mouse button, respectively.

10. An input device according to claim 9, wherein

10       the plurality of operations of the mouse button include a click, a double click, escape and dragging, and

      the converter generates the input operation signal having one of the signal patterns representing the click, double click, escape and dragging in response to zero, one, two and three tapping sounds within the  
15       predetermined period of time, respectively.

11. An input device according to claim 10, wherein when the converter generates the input operation signal having a signal pattern representing the dragging, the converter further generates the input  
20       operation signal having another signal pattern representing end of the dragging when a new tapping sound is detected.

12. An image display system comprising:

an image supply device;

25       an image display device configured to display an image represented by image information supplied from the image supply device; and

an input device configured to supply to the image supply device an input operation signal representing operations of a specific input device,

the input device includes:

30       a tapping sound detector configured to detect a tapping sound made by a user to generate a tapping sound detection signal;

a converter configured to convert the tapping sound detection signal into the input operation signal simulating an operation of a specific input device; and

an operation signal output device configured to output the  
5 input operation signal.

13. An image display system according to claim 12, wherein the image supply device prohibits output of a new input operation signal from the input device for a predetermined period of time after receiving a  
10 previous input operation signal from the input device.

14. An image display system according to claim 12, wherein the image supply device keeps a position of a mark image displayed on the image display device for a predetermined period of time after a first tapping  
15 sound is detected by the tapping sound detector.

15. An image display system according to claim 12, wherein the image supply device changes appearance of an index image displayed on the image display device in response to the input operation signal.

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16. An image display system comprising:

an image supply device;

an image display device configured to display an image represented by image information supplied from the image supply device; and

25 a pointing device configured to supply to the image display device a pointing signal indicating a position on a display screen of the image display device,

the pointing device comprising:

30 a position determination device configured to determine an indicated position on the display screen pointed with a pointing means by a user, to thereby generate a position signal representing the indicated

position;

an acoustic input device configured to generate an input operation signal responsive to a sound made by the user, the input operation signal representing operations of a specific input device; and

5 a pointing signal output device configured to supply the pointing signal including the position signal and the input operation signal to the image supply device,

the acoustic input device including:

a tapping sound detector configured to detect a tapping  
10 sound made by the user on the display screen to generate a tapping sound detection signal;

a converter configured to convert the tapping sound detection signal into the input operation signal; and

an operation signal output device configured to supply the  
15 input operation signal to the pointing signal output device, wherein the input operation signal is transmitted using a transmitter and a receiver.

17. An image display system according to claim 16, wherein the image supply device prohibits output of a new pointing signal from the  
20 acoustic input device for a predetermined period of time after receiving a previous pointing signal from the acoustic input device.

18. An image display system according to claim 16, wherein the image supply device keeps a position of a pointer image displayed on the  
25 image display device for a predetermined period of time after a first tapping sound is detected by the tapping sound detector.

19. An image display system according to claim 16, wherein the image supply device changes appearance of an index image displayed on the  
30 image display device in response to the pointing signal.